Academic Support Centers Assessment Report – Fall 2014

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1 INTRODUCTION

Florida SouthWestern's Academic Support Center (ASC) employs a series of assessments in order to support and strengthen the capabilities of each center (writing, math, and oral communications) in providing assistance in student achievement of the General Education competencies. Student learning centers have been shown to successfully improve student learning outcomes across the curriculum (Hendriksen et al., 2005) as well as increase college preparedness (Perin, 2004) so data-driven improvement has potential for a compounded effect across multiple disciplines college-wide as well as within the learning centers. Information gathered from assessment is intended to be shared with ASC leadership and staff as well as, in certain cases, among faculty and students and is in partial fulfillment of the assessment goals established in Fall 2014 which is to include the entire 2014-15 academic year.

For additional detail on further analysis not provided in this report, please contact Dr. Joseph F. van Gaalen, Coordinator of Academic Assessment, Academic Affairs Assessment (jfvangaalen@fsw.edu; x6965).

2 WRITING CENTER

The assessment goal for the ASC Writing Center is to gauge achievement in college composition courses as they relate to time spent receiving support from the ASC Writing Center. In the Fall 2014 semester, ASC leadership established a goal that during the 2014-15 academic year, students with similar entering grade point averages (G.P.A.) who receive greater than two hours of support in the ASCs for writing and are enrolled in ENC1101 Composition I or ENC1102 Composition II will obtain satisfactory grades (A, B, or C) at a rate of 10% higher than students who do not receive support via writing consultations. This objective is defined within the Academic Support assessment program as Student Learning Object 5, or SLO5.

2.1 DESCRIPTIVE STATISTICS & LEARNING OBJECTIVES

The ASC leadership established measure of success for SLO5, student success rate in ENC1101 or ENC1102 increases by 10% given two or more hours of ASC writing consultation time, was met in all cases except the highest achieving students based on incoming GPA. Success rates for those receiving greater than two hours of consultation exhibits is 54% higher for those with a GPA < 2.0, 28% higher for 2.0-2.49 GPA, 14% higher for 2.5-2.99 GPA, 13% higher for 3.0-3.49 GPA, and 7% higher for greater than or equal to 3.5 GPA (Table 1). A graphical representation of this data is shown in Figure 1.

n = 3312	n ≥ 2hr	n > 2hr
Success Rate 10% higher for n ≥ 2hr		
GPA < 2.0	100%	46%
GPA 2.0 – 2.49	80%	52%
GPA 2.5 – 2.99	83%	69%
GPA 3.0 – 3.49	95%	82%
GPA ≥ 3.5	100%	93%

Table 1. Success rates in ENC1101 or ENC1102 for those receiving greater than two hours consultation in the Writing Center and those receiving less than two hours consultation based on GPA upon entering college.

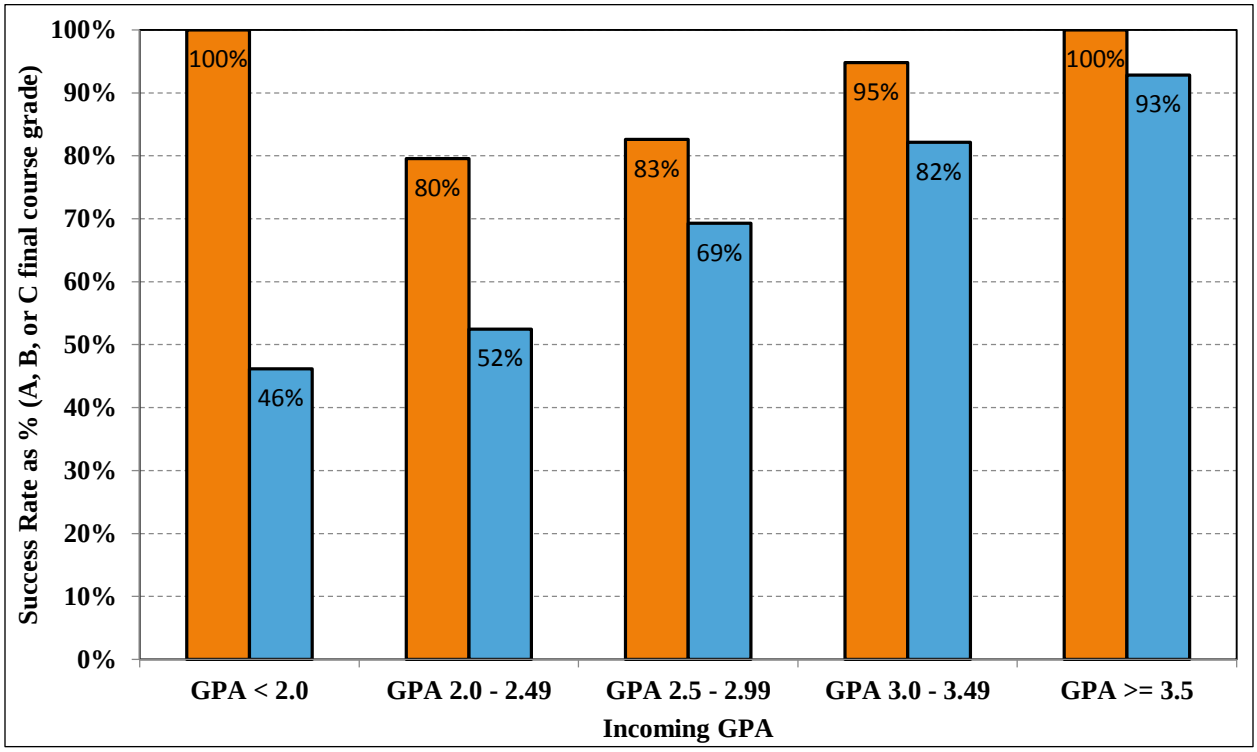

Figure 1. Success rates in ENC1101 or ENC1102 for those receiving greater than two hours consultation in the Writing Center (orange) and those receiving less than two hours consultation (blue) based on GPA upon entering college.

A Cochran-Mantel-Haenszel (CMH) test was conducted on the success rate data of those who accrued more than two hours of consultation time in the ASC Writing Center and those that did not to determine statistical significance of the results according to standard methods (McDonald, 2009). In other words, the CMH test compares overall, regardless of GPA, whether the two cohorts (≥ 2hr consultation or ≤ 2hr consultation) are statistically significantly different and is not an analysis of individual GPA cohorts. Based on the results of the CMH test for repeated tests of independence, students with greater than two hours of consultation have a statistically significantly higher success rate than those who accrued fewer than two hours of consultation time (χ^2_{MH}=30.112, 1 d.f., P=4.08x10^{-8}). The null hypothesis that the relative proportions of success to failure between students accruing more or less than two hours of consultation time are independent of each other is rejected.

2.2 Exploratory Analysis

The sample size for ASC visitors defined by incoming GPA is 3312 because not all student data files include inbound GPA. This sample size, 3312, is just 70% of the full population of ASC visitors (4762).

Additional studies using the full population of ASC visitors are included here to provide further context to the results above and to probe data for additional information.

A comparison of success rate based on time spent in the ASC Writing Center was conducted in order to explore and quantify the value of time spent in writing consultation. The results of the analysis are shown in Figure 2. For students spending two or more hours in the ASC Writing Center, the time minimum used in the definition of SLO5, success rate is approximately 10% higher in ENC1101 or ENC1102.

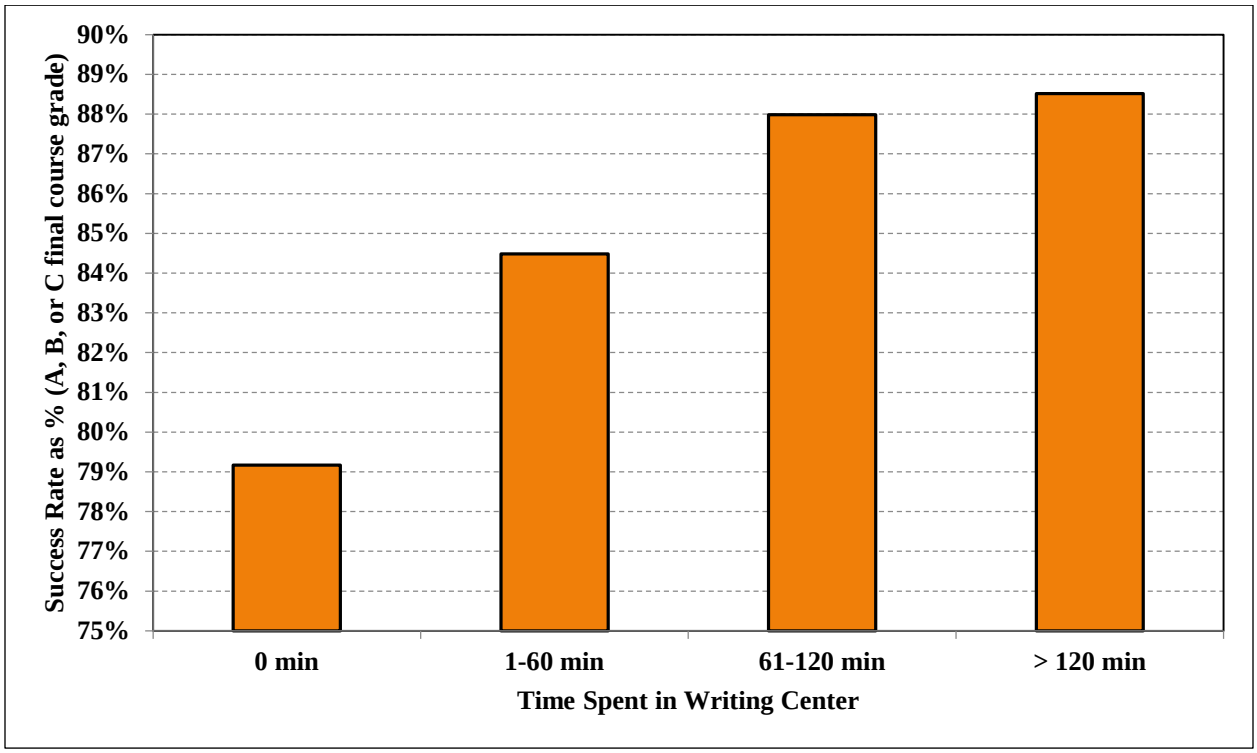

Figure 2. Success rates in ENC1101 or ENC1102 based on time spent in the ASC Writing Center.

A second comparison study of time spent in the ASC Writing Center using only student success rates from ENC1101, the introductory composition course, is shown in Figure 3. Using additional scoring bins dividing those spending 2-4 hours and those spending greater than four hours in the Writing Center, results are similar to those in Figure 2. Success rates incrementally increase in ENC1101 with increased time spent in consultation at the ASC Writing Center (Figure 3).

An additional comparison of ENC1101 students using number of visits to the ASC Writing Center instead of time spent is shown in Figure 4. Success rates for those students with no visits to the Writing Center are 79.2%. Success rate improves for those visiting the center once or twice (85.9%). Success rates increase further with those visiting the center two or more times (87.8%).

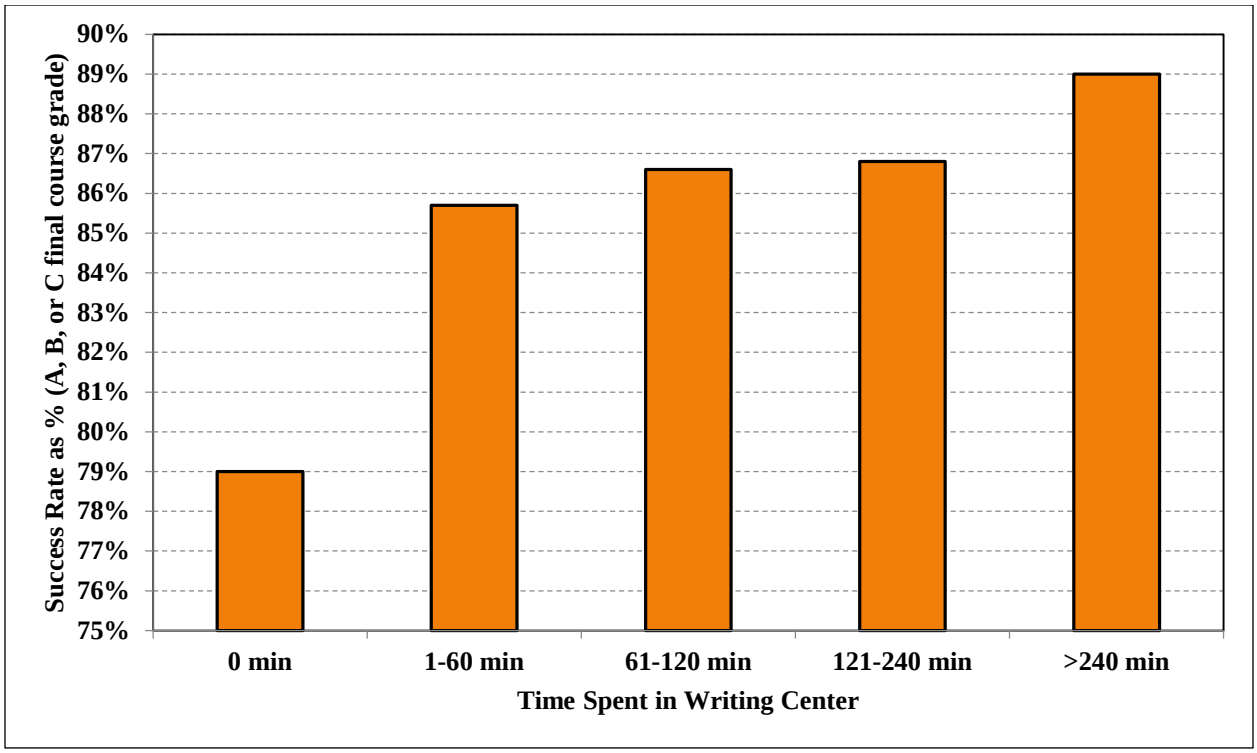

Figure 3. Success rates in ENC1101 based on time spent in the ASC Writing Center.

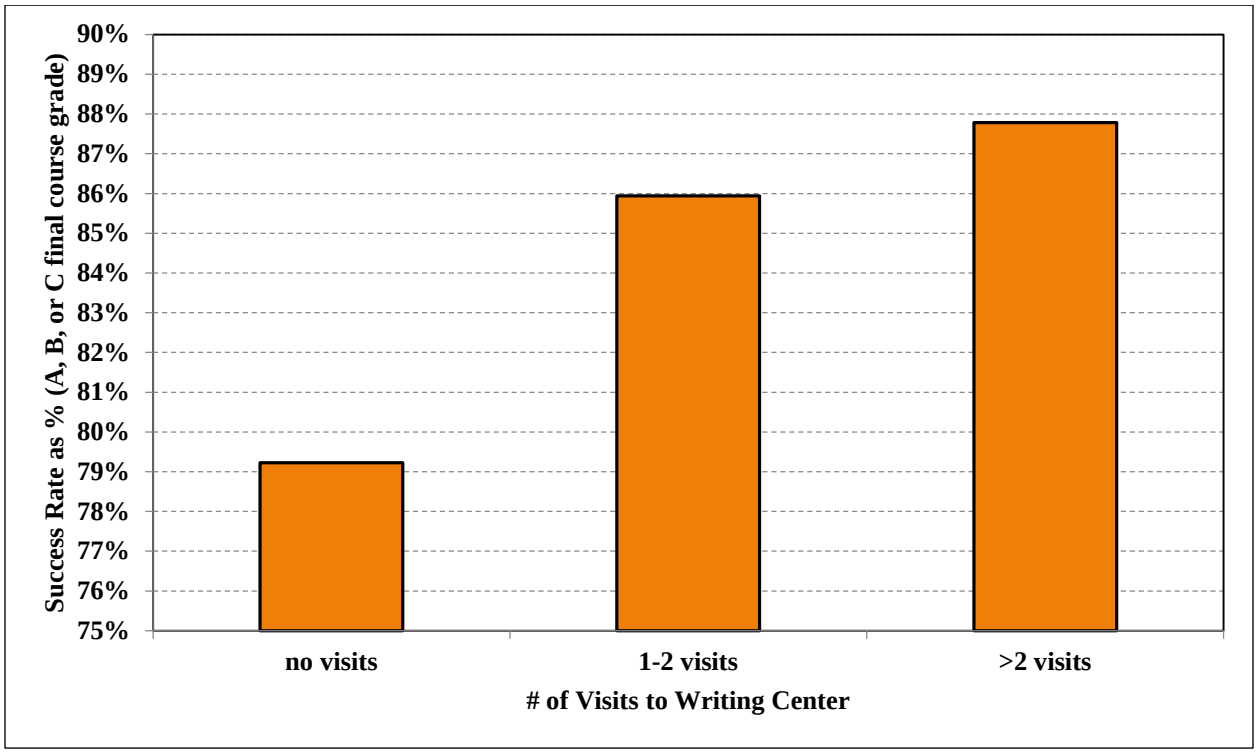

Figure 4. Success rates in ENC1101 based on number of visits to the ASC Writing Center.

3 MATH CENTER

The assessment goal for the ASC Math Center is to gauge achievement in college lower level math courses as they relate to time spent receiving support from the ASC Math Center. In the Fall 2014 semester, ASC leadership established a goal that during the 2014-15 academic year, students with similar entering grade point averages (G.P.A.) who receive greater than two hours of support in the ASCs for math and are enrolled in either MAT0057 Mathematics for College Success, MAT1033 Intermediate Algebra, MAT1100 Mathematical Literacy for College Students, or MAC1105 College Algebra will obtain satisfactory grades (A, B, or C) at a rate of 10% higher than students who do not receive support via math consultations. This objective is defined within the Academic Support assessment program as Student Learning Object 6, or SLO6.

3.1 DESCRIPTIVE STATISTICS & LEARNING OBJECTIVES

The ASC leadership established measure of success for SLO6, student success rate in MAT0057, MAT1033, MAT1100, or MAC1105 increases by 10% given two or more hours of ASC math consultation time, was met in all cases except the highest achieving students based on incoming GPA. Success rates for those receiving greater than two hours of consultation exhibits is 29% higher for those with a GPA < 2.0, 11% higher for 2.0-2.49 GPA, 6% higher for 2.5-2.99 GPA, 19% higher for 3.0-3.49 GPA, and 7% lower for greater than or equal to 3.5 GPA (Table 2). A graphical representation of this data is shown in Figure 5.

n = 2072	**n ≥ 2hr**	**n < 2hr**
Success Rate 10% higher for n ≥ 2hr		
GPA < 2.0	67%	38%
GPA 2.0 – 2.49	37%	26%
GPA 2.5 – 2.99	47%	41%
GPA 3.0 – 3.49	73%	54%
GPA ≥ 3.5	65%	72%

Table 2. Success rates in MAT0057, MAT1033, MAT1100, or MAC1105 for those receiving greater than two hours consultation in the Math Center and those receiving less than two hours consultation based on GPA upon entering college.

A Cochran-Mantel-Haenszel (CMH) test was conducted on the success rate data of those who accrued more than two hours of consultation time in the ASC Math Center and those that did not to determine statistical significance of the results according to standard methods (McDonald, 2009). In other words, the CMH test compares overall, regardless of GPA, whether the two cohorts (≥ 2hr consultation or ≤ 2hr consultation) are statistically significantly different and is not an analysis of individual GPA cohorts. Based on the results of the CMH test for repeated tests of independence, students with greater than two hours of consultation have a statistically significantly higher success rate than those who accrued fewer than two hours of consultation time (χ^2_{MH}=14.547, 1 d.f., P=1.37x10^{-4}). The null hypothesis that the relative proportions of success to failure between students accruing more or less than two hours of consultation time are independent of each other is rejected.

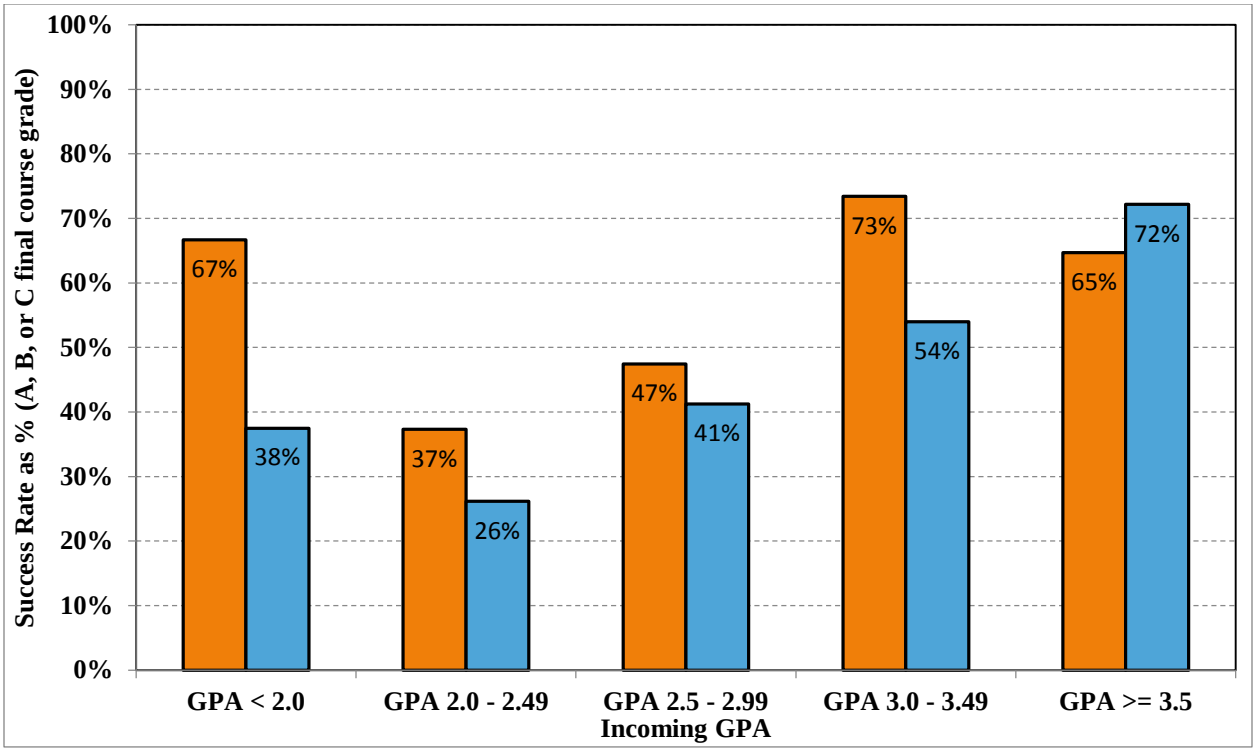

Figure 5. Success rates in MAT0057, MAT1033, MAT1100, or MAC1105 for those receiving greater than two hours consultation in the Math Center (orange) and those receiving less than two hours consultation (blue) based on GPA upon entering college.

3.2 Exploratory Analysis

The sample size for ASC visitors defined by incoming GPA is 2072 because not all student data files include inbound GPA. This sample size, 2072, is just 40% of the full population of ASC visitors (5205). Additional studies using the full population of ASC visitors are included here to provide further context to the results above and to probe data for additional information.

A comparison of success rate based on time spent in the ASC Math Center was conducted in order to explore and quantify the value of time spent in math consultation. The results of the analysis are shown in Figure 6. For students spending two or more hours in the ASC Math Center, the time minimum used in the definition of SLO6, success rate is approximately 7% higher in MAT0057, MAT1033, MAT1100, or MAC1105.

An additional comparison of MAT0057, MAT1033, MAT1100, or MAC1105 students using number of visits to the ASC Math Center instead of time spent is shown in Figure 7. Success rates for those students with no visits to the Math Center are 57.2%. Success rate improves for those visiting the center once or twice (66.8%). Success rates remain higher for those visiting the center two or more times (65.2%).

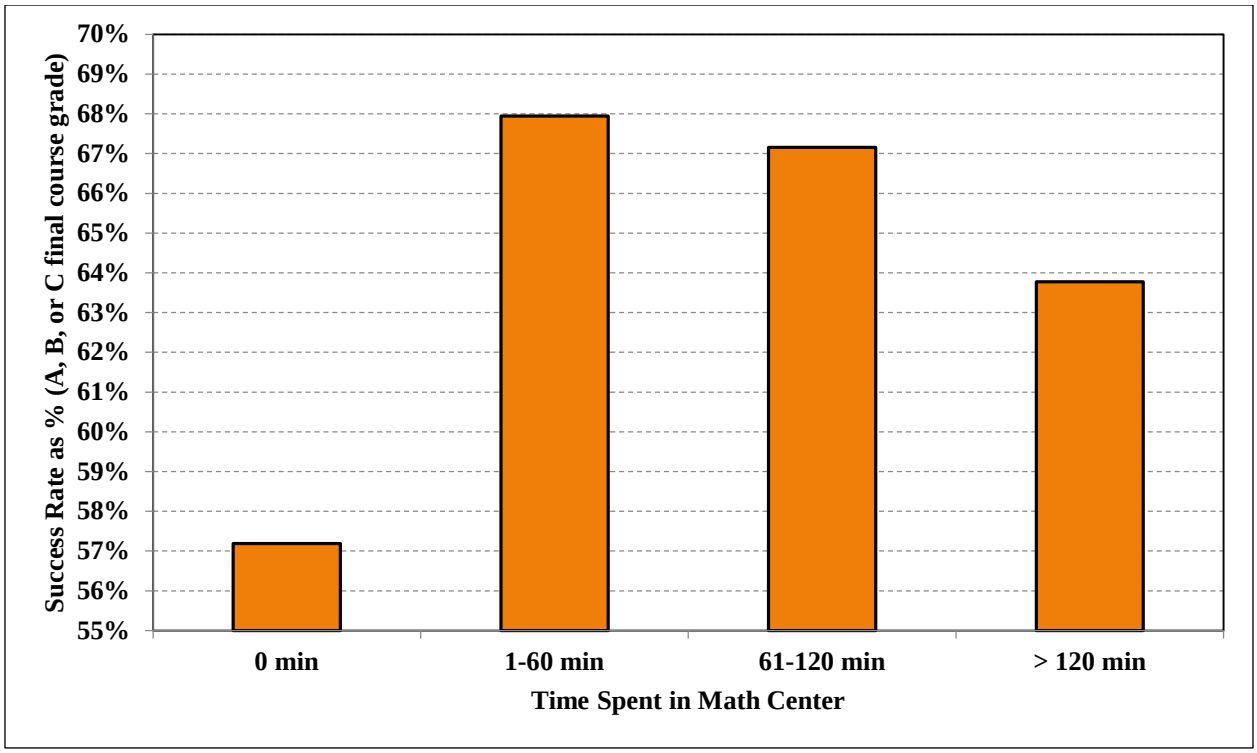

Figure 6. Success rates in MAT0057, MAT1033, MAT1100, or MAC1105 based on time spent in the ASC Math Center.

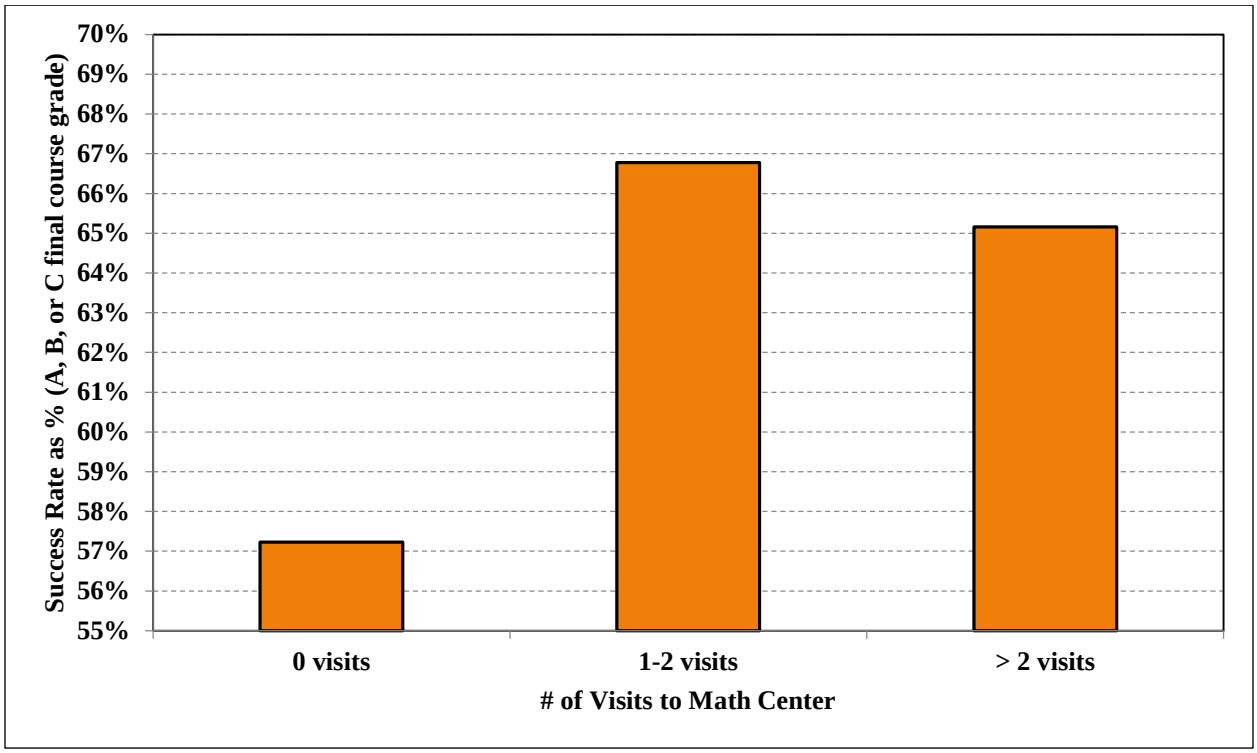

Figure 7. Success rates in MAT0057, MAT1033, MAT1100, or MAC1105 based on number of visits to the ASC Math Center.

4 ORAL COMMUNICATIONS CENTER

The assessment goal for the ASC Oral Communications Center (OCC) is to gauge achievement in college entry level speech courses as they relate to time spent receiving support from the ASC Oral Communications Center. In the Fall 2014 semester, ASC leadership established a goal that during the 2014-15 academic year, students with similar entering grade point averages (G.P.A.) who receive greater than two hours of support in the ASCs for speech/communication and are enrolled in either SPC1017 Fundamentals of Speech Communication or SPC2608 Introduction to Public Speaking will obtain satisfactory grades (A, B, or C) at a rate of 10% higher than students who do not receive support via math consultations. This objective is defined within the Academic Support assessment program as Student Learning Object 7, or SLO7.

4.1 DESCRIPTIVE STATISTICS & LEARNING OBJECTIVES

The ASC leadership established measure of success for SLO7, student success rate in SPC1017 or SPC2608 increases by 10% given two or more hours of ASC oral communications consultation time, was met in some cases, although a small sample size limits the impact of the study. In both the upper and lower GPA scoring bins no inbound GPA data was available for students visiting the OCC. In all, only seven cases in which GPA data was available and students visited the OCC were recorded. The remaining 197 cases in which inbound GPA data was available the student spent less than two hours at the center (Table 3). As a result of this limited data, no significance testing was conducted as the validity of the study would be questionable, at best (McDonald, 2009).

n = 204	**n ≥ 2hr**	**n < 2hr**
Success Rate 10% higher for n ≥ 2hr		
GPA < 2.0	No data	40%
GPA 2.0 – 2.49	50%	69%
GPA 2.5 – 2.99	100%	76%
GPA 3.0 – 3.49	100%	84%
GPA ≥ 3.5	No data	94%

Table 3. Success rates in SPC1017 or SPC2608 for those receiving greater than two hours consultation in the Oral Communications Center and those receiving less than two hours consultation based on GPA upon entering college.

4.2 EXPLORATORY ANALYSIS

The sample size for ASC visitors defined by incoming GPA is 204 because not all student data files include inbound GPA. This sample size, 204, is just 17% of the full population of ASC visitors (1222). Additional studies using the full population of ASC visitors are included here to provide further context to the results above and to probe data for additional information.

A comparison of success rate based on time spent in the ASC OCC was conducted in order to explore and quantify the value of time spent in speech/communication consultation. The results of the analysis are shown in Figure 8. For students spending two or more hours in the ASC OCC, the time minimum used in the definition of SLO7, success rate is approximately 16% higher in SPC1017 or SPC2608. An additional comparison of SPC1017 or SPC2608 students using number of visits to the ASC OCC instead of time spent is shown in Figure 9. Success rates for those students with no visits to the OCC are 82.2%. Success rate improves for those visiting the center once or twice (93.8%). Success rates increase further for those visiting the center two or more times (95.2%).

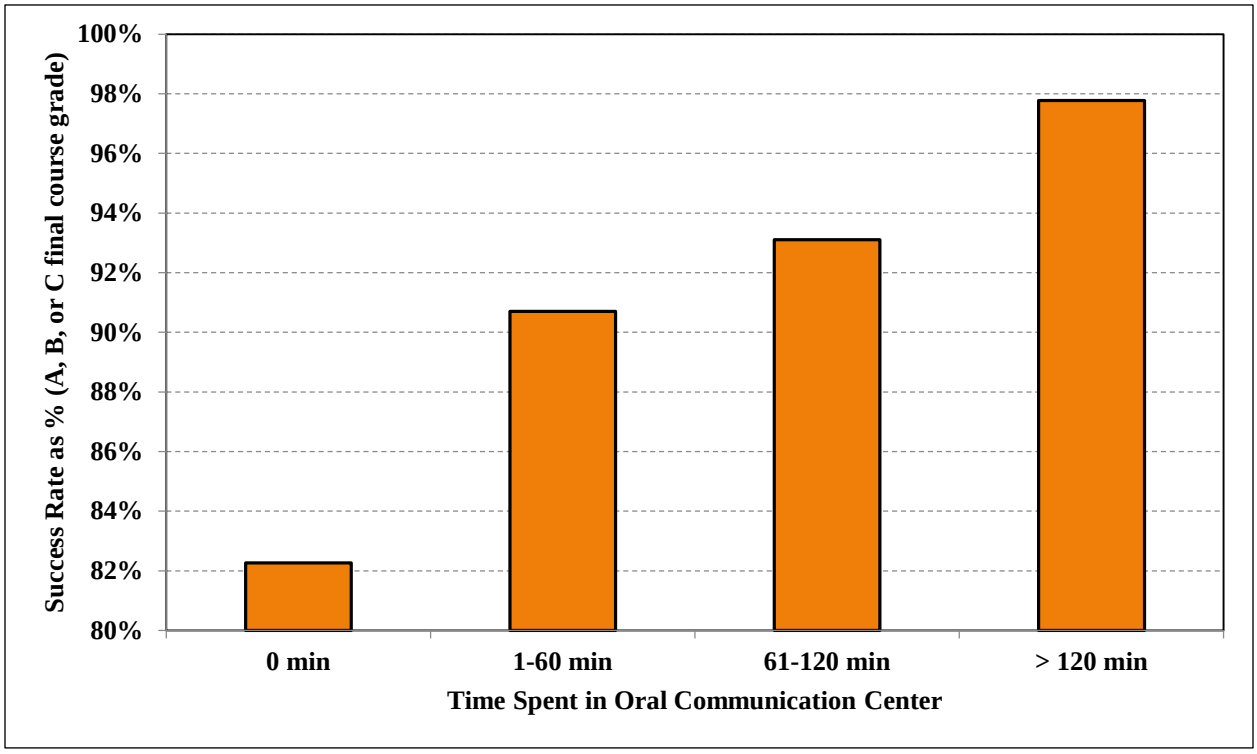

Figure 8. Success rates in SPC1017 or SPC2608 based on time spent in the ASC Oral Communications Center.

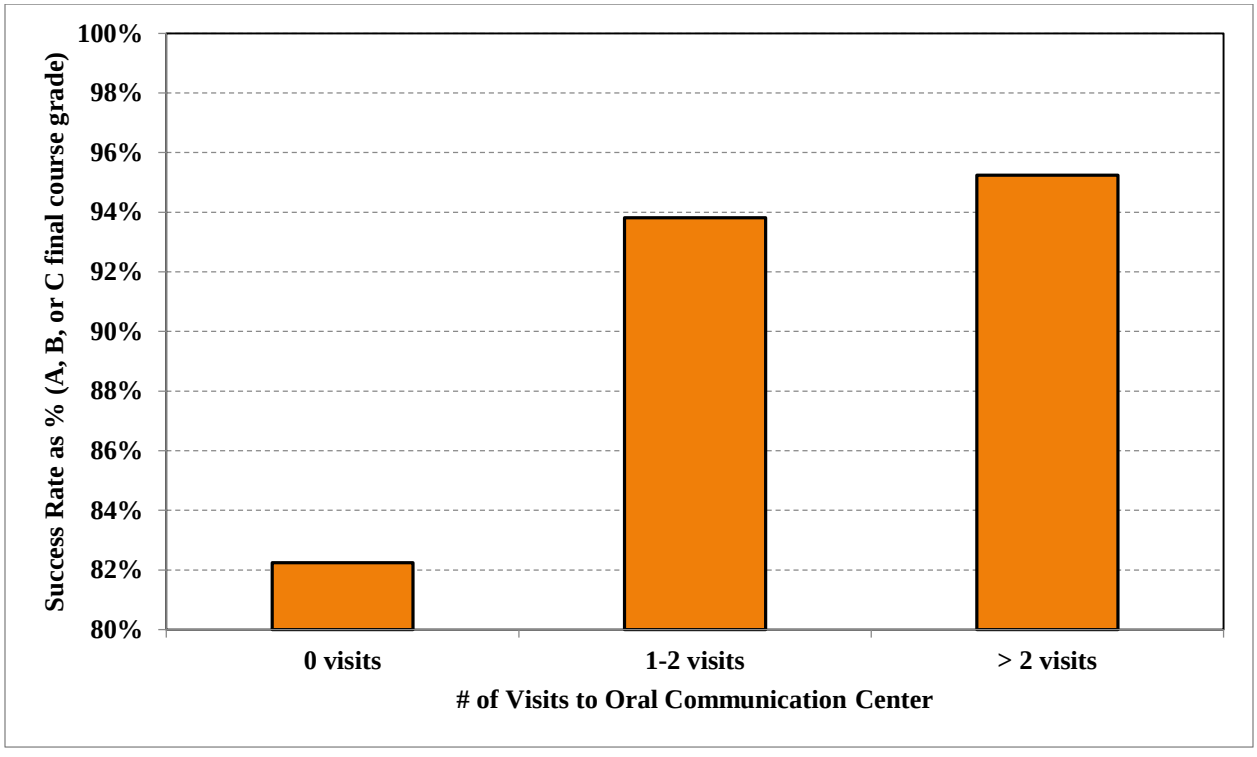

Figure 9. Success rates in SPC1017 or SPC2608 based on number of visits to the ASC Oral Communications Center.

5 CONCLUSIONS

FSW's Academic Support Center employed a series of assessments in order to support and strengthen the capabilities of each center (writing, math, and oral communications). Leadership goals included gauging achievement in composition courses, math courses, and oral communication courses as they relate to time spent receiving support from the associated learning center.

A drill-down of Writing Center results are as follows:

1. Achievement of a 10% increase in success rates in ENC1101 or ENC1102 for those receiving greater than two hours of consultation compared with those receiving less than two hours based on incoming GPA (SLO5) was met with success rates at is 54% higher for those with a GPA < 2.0, 28% higher for 2.0-2.49 GPA, 14% higher for 2.5-2.99 GPA, 13% higher for 3.0-3.49 GPA, and 7% higher for greater than or equal to 3.5 GPA.
2. In a comparison of success rate based on time spent in the ASC Writing Center regardless of inbound GPA, students spending two or more hours in the ASC Writing Center exhibit a success rate approximately 10% higher in ENC1101 or ENC1102.
3. In a similar comparison of success rates based on time spent in the ASC Writing Center using only student success rates from ENC1101, the introductory composition course, there exists an incremental increase in success rate with increased time spent in consultation.
4. In a third study comparing ENC1101 students using number of visits to the ASC Writing Center instead of time spent, the success rate for those students with no visits to the Writing Center are 79.2% whereas those visiting the center once or twice is 85.9% and those visiting the center two or more times is 87.8%.

A drilldown drill-down of Math Center results are as follows:

1. Achievement of a 10% increase in success rates in MAT0057, MAT1033, MAT1100, or MAC1105 for those receiving greater than two hours of consultation compared with those receiving less than two hours based on incoming GPA (SLO6) was met for all but the highest GPA scoring bin (≥3.5). Success rates for those receiving greater than two hours of consultation exhibits is 29% higher for those with a GPA < 2.0, 11% higher for 2.0-2.49 GPA, 6% higher for 2.5-2.99 GPA, 19% higher for 3.0-3.49 GPA, and 7% lower for greater than or equal to 3.5 GPA.
2. In a comparison of success rate based on time spent in the ASC Math Center regardless of inbound GPA, students spending two or more hours in the ASC Math Center exhibit a success rate approximately 7% higher in MAT0057, MAT1033, MAT1100, or MAC1105.
3. In a similar comparison of MAT0057, MAT1033, MAT1100, or MAC1105 the success rate for those students with no visits to the Math Center is 57.2% whereas those visiting the center once or twice is 66.8% and those visiting the center two or more times is 65.2%.

A drill-down of Oral Communications Center results are as follows:

1. Achievement of a 10% increase in success rates in SPC1017 or SPC2608 for those receiving greater than two hours of consultation compared with those receiving less than two hours based on incoming GPA (SLO6) was inconclusive. Only seven cases in which GPA data was available and students visited the OCC were recorded.

2. In a comparison of success rate based on time spent in the ASC Oral Communications Center regardless of inbound GPA, students spending two or more hours in the ASC Oral Communications Center exhibit a success rate approximately 16% higher in SPC1017 or SPC2608.
3. In a similar comparison of SPC1017 or SPC2608 the success rate for those students with no visits to the Oral Communications Center is 82.2% whereas those visiting the center once or twice is 93.8% and those visiting the center two or more times is 95.2%

6 REFERENCES

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